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THE GENESEE FARMER.

SATURDAY, JUNE 2, 1838.

### Brief Hints on Gardening.

Constant attention will soon be necessary, to keep the young crops sowed the preceding months from weeds, and wherever seeds have come up too thick, thin them to the proper distance. Vacant spaces, if any occur, should also be filled up by transplanting. This is particularly applicable to root crops.

It is not yet too late to plant several of the garden crops, and in some instances this may be done with great advantage where seeds have failed in vegetating, or where the lateness and wetness of the season has hitherto prevented.

*Corn*, if of early kinds, planted immediately, will ripen early in autumn.

*Beets*, sown now, will produce a good crop before winter, and they will be less liable to be tough or stringy, than when sown very early. As beet seeds do not always vegetate freely, vacant spaces caused by failure, may be supplied either by transplanting or sowing fresh seed.

*Peas*, needed for succession, sown in this month, should, if the ground be dry, be previously soaked a few hours in soft water, and an occasional watering for a few days will accelerate their growth.

*Radishes*, for a succession, may be sown twice a month throughout the early part of summer. They succeed best where the soil is chiefly coarse sand, and are frequently obtained much finer and straighter by making a hole for each plant with a sharp pointed stick at the time of sowing, and filling it with light soil.

It is not yet too late to plant the different varieties of the *Kidney bean*. Unlike peas, they succeed best on a *rich* soil, and they may be planted either in hills or in drills. Runners, however, are planted in hills only. The Early Red Eye China, is an exeellent bush bean for an early crop, and the Lima is pre-eminent among runners.

*Cucumbers* for pickles, may be planted any time during the month. The Long Green is commonly chosen for this purpose, but the Early Cluster is perhaps preferable on account of its smaller fruit and the abundant supply it produces. Cucumbers and melons of last month will require hoeing and thinning; if the ground is rich, there should be but two or three plants in a hill.

*Asparagus*, towards the latter part of the month, should be sparingly cut, that the stems may grow and the roots be not injured by exhaustion.

*Cabbage*, *cauliflower*, *broccoli*, and *tomatoes*, may be transplanted; for the successful performance of the work in dry weather, see the direction for last month.

*Fruit trees*, especially if young, should have all weeds and grass removed from around them for two or three feet on each side, and the surface hoed and kept mellow.

In dry weather, water all plants which suffer from drouth, always doing it in the evening.

*Melons*, *cucumbers*, and *squashes*, will need attention to preserve them from the depredations of the striped bugs. A very effectual remedy is to pass along them two or three times a day and destroy all visible, by means of thumb and finger. Other and more expeditious remedies are recommended, some very highly; one, is a strong decoction of tobacco upon the plant; another, doubtless effectual, consists in covering each hill with a small wooden or wire frame on which gauze or millinet has been stretched. Alexandor Gordon, [Genesee Farmer vol. 3, p. 166,] states, "I have seen a plan adopted by a friend of mine in the vicinity of Rochester, which has enabled him to set these destroyers at defiance, merely by placing a covering of raw cotton over the hill suffisiently thick to prevent the ingress of any insect. Such hills as were left exposed the plants were completely destroyed, while those which were covered with the cotton, escaped the smallest injury." The importance of preserving the cotyledons or seed leaves from injury is not generally known. They are far more essential to the young plant in its earliest stage than other leaves; if removed early, the young plant is sure to die, and its growth is greatly retarded if they are partly destroyed or injured.

*Cabbages*, *corn*, *beans*, &c. are often destroyed by grubs, which eat them off below the surface. The injury is soon visible by the withered leaves of the plant. Such crops should be examined every morning, and where plants have been eaten off during the night, the destroyer will always be found within two or three inches of the plant. Cabbages are effectually protected by inclosing each plant with a small roll of oiled writing paper, descending far enough into the soil to prevent their access. J. J. T.

### Beet Sugar—Enquiry.

We make the following extract from a letter of a subscriber near Clear Spring, (Md.)

"I have serious intentions of establishing a beet sugar manufactory—and being totally ignorant of the necessary buildings for such an establishment, their expences, &c. I have to ask of you the favor to publish the most approved remarks upon that subject—the probable cost of extracting sugar—and the yield of sugar from a given quantity of beets."

We have seen no detailed account of the plans and expences of buildings suitable for the manufacture of beet sugar; and indeed it is evident that nothing on this point could be determined with certainty, until the extent of the manufacture was first ascertained. In this country few, if any, buildings have been erected expressly for this manufacture; and in France and Germany, the buildings are adapted to the quantity of beet root intended to be manfactured.

Count Chaptal in his work on Agriculture, says—"The expence of the necessary accomodations and utensils required for operating upon 10,000 lbs. of beet root daily, cannot be defrayed with less 20,000 francs. But if a permanent stream of water, and a wine press, can be made use of, the expence may be reduced to 16,000 francs." Chaptal's Essay is probabbly the best manual which has yet appeared, and though much of the process described by him can and will be dispensed with in this country, yet as affording a correct view of the chemical principles of the manufacture, it should be in the hands of every one who intends attempting the manufacture.

In another part of our paper we have given an article on the subject of beet sugar, containing the latest and most authentic information on the state of the manufacture abroad. It is from the pen of D. L. Child, Esq. who has visited Europe for the purpose of obtaining all the necessary information in regard to the extraction of the sugar, and its proper refining. From Mr. C's. statements, it would appear that by the improved processes the difficulties are materially lessened, and the quantity of sugar made greatly increased. To that article we with pleasure refer our correspondent.

Although we think the manufacture of beet sugar will certainly succeed in this country; yet we would guard our friends against the anticipation of extravagant profits. Because it has succeeded in France and Germany, is no positive proof it will succeed here; as in those countries, the duties on imported sugars amount to a prohibition, and of course enable the manufacturers to sell their sugars at prices which could not be obtained here. But when we take into view our greater facilities for manufacturing; the difference in the rent of land, and the price of fuel; and the great simplification which has already taken place in the process and the increased product in sugar, with the certainty that the difficulties yet remaining will be overcome by American ingenuity and skill, we are confident it will yet prove a source of great benefit to the country. On this subject, as well as that of the manufacture of silk, both topics of great interest to the agriculturist as well as manufacturers, we shall endeavor to give the earliest notices of improvements, and their respective prospects.

### Sowing Ruta Baga.

This is frequently done too late. It should be performed as early in the sixth month (June) as practicable. The roots always continue growing till cold weather, consequently early sowing is followed by larger crops. A light soil is best, but any will do which is not wet, and is deep, mellow, and rich. It can scarcely be manured too highly.

There are three ways of sowing. Where a turnep drill is not at hand, the easiest way is to sow broadcast, but the crop is not quite so great as when sown properly in drills, the plants not being so evenly distributed. The second way is to plant them in drills about fifteen or eighteen inches asunder, with the plants about ten inches in the drill. It is best to sow them much more thickly, and subsequently thin them, to prevent the loss occasioned by vacant spaces. The cleaning in this method, is done wholly with the hoe. Twice the number of roots to the acre are thus produced, that are obtained by the method of placing the drills at twice the distance to admit a cultivator, though their proximity doubtless lessens in some degree their size.

The third method is to plough the land into deep furrows about two and a half or three feet apart, fill them with manure, and throw the soil with a plough back upon it, and thus form manured ridges for planting the drills upon. This method is peculiarly adapted to heavy soils, or to those which suffer from wetness. Those farmers who have none but clayey land, should try it effectually.

The quantity of seed required is about one pound to the acre. They require much thinning—those unused to to the cultivation of them usually permit five times too many to remain on the ground.

Those only doubt their value, who have witnessed none other than the injudicious use of them.

Ordinary crops, properly managed, are not less than 500 or 600 bushels to the acre,—favorable seasons 800—1000 are frequently obtained, and in rare instances at the rate of 2000 to the acre. J. J. T.

### Vineyards and Wine in France.

We collect the following particulars respecting the importance of the grape to France, from Dr. Bowring's Report on the Commercial intercourse between England and France. The vineyards of France cover an extent of 6,600 square miles; and the statistical society of Paris estimate the quantity of wine produced at 998 millions 932,000 gallons, worth at an average about 12 cents a gallon. This wine is disposed of as follows:—

| | | |
|---|---|---|
| Consumed by the proprietors, | 198,000,000 | gals. |
| Distilled for brandy, | 141,680,000 | " |
| Loss and waste, | 91,344,000 | " |
| Loss in hands of dealers, | 44,000,000 | " |
| Exported, | 24.530,000 | " |
| Used for Vinegar, | 11,000,000 | " |
| Duty recovered on consumption is, | 308,000,000 | " |
| Fraudulent consumption, | 105,466,000 | " |

If we allow the population of France to be 40 millions, and deduct the quantity distilled and exported, it leaves about 20 gallons to be consumed annually by each individual; a result which seems hardly reconcilable with the boasted temperance of the French people; though it shows plainly the great importance of the manufacture to the nation.

### The Geological Reports.

For the information of such readers as have not had an opportunity to examine the Reports of our State Geologists, we design to give some sketches of their labors and discoveries.

*James E. De Kay* in a letter of ten lines to the Governor, says, "You will have perceived from the nature of the duties of the Botanist and Zoologist, that they cannot make partial reports until their labors are brought to a close"; but adds "that they are actively engaged in their respective duties."

The Report of *Lewis C. Beck* on the Mineralogical and Chemical Department of the Survey is elaborate, and of great interest. In the early part of last season, he examined several deposits of metallic minerals in the counties of Orange and Lewis,—which are noticed and described. At *Forshee's* Mine in the former county, delicate fibres of asbestus frequently run through the compact iron ore; and with regard to a fine locality of mica near this mine, he says "some of the plates are of a large size. One of them was nearly three feet in diameter, but in consequence of its being exposed to the weather, it was fractured in the form of rhombic and triangular plates. *Dr. Horton* and myself succeeded in obtaining a specimen about twenty-two inches in length and tolerably perfect." The iron mine is in a hill of gneiss; and garnet, serpentine, and tremolite are found in its immediate vicinity.*

In the county of Lewis, although his excursions were necessarily limited, he examined several localities of the ores of iron and lead, and concludes that the district possesses great mineral wealth. He also visited the counties of Westchester, Albany, Oneida, Madison, Onondaga, Cayuga, Wayne, Monroe, Livingston, Genesee, Niagara, Erie, and Chautauque,—collecting several hundred specimens illustrative of their mineralogy. His attention however, was chiefly directed to the study of our mineral springs, and especially those of the principal salt-works.

It appears that no brine spring has been discovered further east than Salt Springville, about fourteen miles from Cooperstown, on the line of the counties of Otsego and Montgomery; and Dr. B. justly remarks that "this locality is interesting in a geological point of view, as it occurs in the Second Greywacke of Mr. Eaton, a formation much older than that in which the great brine springs of this state are found."

We would respectfully inquire however, if this brine may not find its way from the "Saliferous Rock" which is *higher* in the series than the Second Greywacke?—although we know that salt springs occur in very different formations. Those referred to by Dr. B. in Broome and Cortland counties, would be strong evidence on this point, as they occur at great elevations above the red saliferous rock of our northern counties; but there are springs which yield this mineral in Bradford and Lycoming counties, Pa. which are geologically many thousand feet above that rock. One of these is doubtless in Prof. *Rogers'* XI Formation, a red rock, and apparently occurs but a few hundred feet below his "Thin Calcareous Conglomerate."

Further, at Kenhawa, it appears that the hills adjacent to the brine springs, furnish coal in abundance; and if the coal measures of that region, belong to the same formation as those of Pennsylvania, the salt may occur in a newer formation than our "Saliferous Rock;"—but we only throw out this suggestion to promote investigation.

Brine springs are found further west than Elba, the limit assigned them by Dr. B. The late *Joseph Ellicott* erected salt works about four miles northeast of Lockport, and the manufacture was continued for some years. Those at St. Catharines in Upper Canada, still further west, were long in operation.

Dr. B. has mentioned the brine spring at Holley village. This spring, another at Otter creek some miles further west, and the spring at St. Catharines, all occur in deep ravines of the red rock. At Otter creek, salt was also manufactured, but the site, like that at Holley, is now covered up by the Erie Canal.

We would apprise those who may be tempted to explore for salt water in the "Pyritiferous Slate," that *the whole thickness of our limestone formation is interposed between them and the "Saliferous Rock,"* amongst which all our *valuable* brine springs have been found. This is explained by the general dip of the strata to the south, a circumstance of great importance; and we have not one word of encouragement for our friends in Cattaraugus or Chautauque, who may be inclined to bore for this purpose.

After examining the different theories Dr. B. says, "on the whole therefore, the probabilities are greatly in favor of the theory which attributes the origin of the Onondaga brine springs to beds of massive or fossil salt—because the strata in the vicinity are exactly similar to those which are found near the deposits of fossil salt in foreign countries; the brine in all the wells increases in strength with the increase in their depth; the soil in the vicinity is subject to those peculiar slips or sinkings which have also been observed in the vicinity of beds of rock salt; and finally, because it is not open to many of those serious objections which may be urged against the other theories."

It appears to us of some importance however, properly to distinguish *these* "peculiar slips or sinkings" from *those* which so frequently occur in limestone; and which we feel confident have no affinity whatever with brine springs. Undoubtedly, one great object of this Geological Survey should be to discourage enterprising men in search of minerals where every probability is against them.

With one exception perhaps, which Dr. B. has noticed, he says, "the Onondaga brines are the strongest of all the American varieties. But there are still some considerations which should be taken into the account in estimating the relative value of these brines. Thus the Kenhawa brine is said not to contain any sulphate of lime, and hence the process of obtaining the salt in a pure crystalline form is attended with fewer difficulties than usual. Another great advantage possessed at these salines is, that coal may be obtained at comparatively little cost from the hills adjacent to the salt furnaces."

Dr. B. then adverts to the economizing of fuel—suggests that deeper borings might obtain a more highly concentrated brine—and refers to the practice in Europe of employing piles of faggots through which the salt water trickles, and by greatly extending its surface, hastens evaporation. Some years ago, it was proposed to load a large horizontal wheel in this manner; and while the brine fell over the faggots from a watering pot, the wheel was to revolve with velocity. We believe however, that the experiment was never tried, although several facts might be adduced to favor its adoption. The coarser impurities might be separated in this way from the brine; and the effect of a brisk wind in hastening evaporation is well known.

From an analysis of eleven kinds of salt, made by Dr. B. it appears that the purest is made by solar evaporation at Geddes, and this contains out of 1000 parts 992½ parts of pure chloride of sodium. The next in purity is the *Table Salt*, prepared at Salina, containing $991\frac{7.3}{100}$ parts of pure salt, while that from Liverpool in England contains but $988\frac{99}{100}$. The impurities found in common salt consist chiefly of the carbonates of lime and magnesia, sulphate of lime (plaster) and the chlorides of calcium and magnesium. The sample from Liverpool (Eng.) contained two parts (of the 1000) of Glauber's salt.

*(To be continued.)* T.

* In order to preserve a clearer page, we use much of Dr. B.'s language without the marks of quotation.

### MISTAKES.

It is a serious mistake that a farmer commits when he suffers his manures to lie over the summer in his yard, leached by rains, and wasted by winds, while his root crops are suffering for the want of them. Corn, potatoes, ruta baga, &c. are the swine of the vegetable creation, requiring high keeping, and rarely or never suffering with surfeit. They will both eat what they can; digest, and then eat again, and the more the better.

It is another mistake to give the manure to white or grain crops, while in a fresh or only partially fermented state. It may make great straw, but unless the natural principles of fertility are abundant in the soil, independent of the newly applied manure, the grain will be inferior. Let the greedy feeders above named have the first chance; the second table will better suit the more delicate grains.

It is a great mistake to put seeds into the ground, unless it is properly prepared and in a good state for their reception. Soils can scarcely be made too fine, or too mellow, and seed should never be put in when the soil is wet and adhesive. Better to wait a few days until your ground is in good tilth, or till the surface is no longer mud, than to scatter seed among unbroken clods, or have it bedded and baked in a quagmire.

It is a serious error in husbandry to plant or sow any but the best seed. Chess and cockle in winter wheat, oats in spring wheat or in barley, or impure grass seeds, should never be put into the ground. It lessens the value of the crop; it increases and perpetuates those pests of the farmer, weeds; and it gives a miserable example of husbandry to surrounding farmers. In this respect, let every one correct one, and the evils complained of would speedily be cured.

It is a gross mistake to propagate inferior breeds of animals, particularly cattle and swine, when those of the best qualities can be so readily obtained. An improved Devon was lately slaughtered at Smithfield, 19 months old, that weighed over 13 cwt. How many of our four year olds, after being kept and fattened till that age, would equal this yearling? And do not our farmers usually throw away about one half of their swine feed in getting animals into 'good working order,' when the improved China or Berkshire pigs, would fatten without a squeal on what these lean gluttons waste.

It is a great mistake in economy, for a farmer to neglect his garden. It is of no use to say, 'I have so much work to do in the field, that I cannot attend to my garden,' for if so, you are a bad calculator, and lose more than you gain. From a half-acre-garden, well managed, a family can almost live; and the time required for keeping it in order cannot be named in comparison with the actual profit. Let the girls remember it is no disgrace to be seen in a garden, and that weeding an onion bed, is as honorable an employment as playing on a piano. Utility before amusement, should be the motto of all; and if the inculcation of this principle is neglected by parents, the error is not unfrequently fatal to the happiness and prosperity of the child.

### Garden Soils.

Soils in which siliceous matter is nearly the only constituent, are not injured by wetness, but as they do not retain moisture, they suffer from drouth, and incline to sterility. Those in which clay predominates, retain moisture, but are injured by water, and are rendered by it incapable of being worked in wet weather. The best soil of all for gardening is one which contains just such a proportion of alumine as to render it retentive, and so much sand that it does not become heavy and adhesive, and bake in dry weather. Those which contain more clay than this medium, should be termed *clayey loams*, and those which contain less, *sandy loams*, though the common use of these terms is very arbitrary and variable. Thus, in a clayey region of country, a soil would be termed *sandy*, which was more so than the majority of land; while in a sandy region the same soil would be considered as very *clayey*, and would be so described. Hence the importance of analysis in order to determine definitely the proportions.

A very large portion of the gardens of Western New-York, consist of *clayey* soils, that is, of those which may be injured for the season if worked when too wet. Hence it becomes an object to remove this defect. Thorough underdraining, to prevent all unnecessary moisture in the soil, will greatly contribute to this object. Stable manure, when well mixed with the soil, will add to its looseness. The same effect will be produced in a still

higher degree by fine chip manure, and by burnt earth. Carting on clean *coarse* sand will produce the same result, and if the quantity be large, will greatly lessen the unpleasant quality of an adhesive soil. By the additional care never to work it when too wet, a heavy soil may be kept mellow and friable through the season. This is of great importance, for if a soil once becomes baked, it renders tillage very imperfect, at the same time laborious, retards the absorption of moisture, occasions injury by drouth, prevents the germination and growth of plants, roots cannot extend themselves in it, and nothing but the penetrating power of the frost of the succeeding winter can reduce it properly to a state of pulverization. J. J. T.

## BUTTER.

If there is any process connected with the dairy, requiring extra care and neatness, where every thing should always be perfectly neat, it is the making of butter. The quantity of the article, its purity and sweetness, the character and the profits of the vender are inseparably connected with the management in this respect. Not only the character of an individual is greatly affected by the state of his butter, but even that of cities is influenced by the same cause. Ask the man who deals extensively in butter, and you will find he has formed his opinion of the men and women with whom he deals from the quality of their butter, and nine times out of ten his judgment as to their domestic management and neatness will be correct. Ask of a Philadelphian the things most worthy of note in his city, things of which he is most proud; and next to the clean rectangular streets, and the Fairmount waterworks, he will direct your attention to the beautiful piles of butter displayed in the market, butter which in quality the United States and perhaps the world cannot equal. We are confident if the good housewife who superintends the making of butter, could be made sensible of the immense difference there is between good and poor butter, and how much a little attention would contribute to the comfort and good nature of the public, as well as increase her profits, there would be far greater quantities of good butter offered in our markets than there now is.

In speaking of the dairy, Mr. Colman makes the following remarks, which we quote because they are applicable to more sections of our couutry than the one he has designated.

"It cannot be denied that a great part of the butter made in New England, is of an inferior quality; and bears a disadvantageous comparison with the butter of Pennsylvania and New-York. There is a freshness and delicious flavor to be found in the Philadelphia and much of the Goshen (or Orange) butter, which is rarely, though sometimes, met with in ours. It may depend somewhat upon the animal herself; somewhat upon the feed; but I believe oftener upon the management."

Mr. Colman is doubtless correct. The great dairies which furnish the most of the butter in the Philadelphia market are managed with a regard to system and neatness unrivaled. A uniform temperature in the milk room produced at all seasons by spring water, and the most unexceptionable neatness in every thing connected with the milk, cream, or butter, have contributed to this effect; and the same system has acquired for the Goshen butter the high reputation it enjoys.

In the country, or away from the Atlantic cities, there are few extensive dairies, and the markets of the interior cities and villages are principally supplied from the dairies of the common farmer. Of course the quality of the butter is as variable as the habits and situation of the makers; and while some of it would not suffer by a comparison with the best made in the country, there is more that is poor, and much that is absolutely unfit for eating. Such a state of things need not, and if consumers were attentive to their own interests, would not exist; and a thorough reform might be effected in the matter.

One great fault in the butter made by the common farmer, is, that the cream is kept too long. It becomes sour and bitter, and to make good sweet butter from such cream is beyond the power of the dairy woman. Another defect arises from the manner in which the milk is kept. If put, as it not unfrequently is, in what is called the cellar kitchen, it is exposed to the effluvia of decayed vegetables, stagnant water, musty barrels, and the other causes of impure air that usually exist in such places; and if otherwise, the milk room or pantry, is not unfrequently the depository of vinegar, cider, pickles, the remains of the dinner table, and exposed to the air of the cooking room, loaded as that must be by exhalations not always of the sweetest or most inviting kind. Butter so made cannot be expected to be good; the smoke, the effluvia, the impurities of the air in which the cream is formed and the butter made, will have its impress on the article and destroy its sweetness.

The color of butter, and much of its peculiar qualities, are supposed by many to be depending on the cow herself, the breed, richness of cream, &c. but we are inclined to think that more is depending on the management; and the following instance related by Mr. Colman, goes far to prove the correctness of this opinion. Two neighbors allowed their cows to run together, and used them in alternate weeks, the cows using the same pasture. One of the women in the week when she milked the cows, produced from them a beautiful and sweet yellow butter; the other in her week, from the same cows, produced an inferior butter, white and crumbling like cheese. The first kept her milk in a well aired room above ground; the latter kept hers in the cellar.

Let those who wish to improve the character and quality of their butter keep a few simple rules in view, and they will hardly fail of success;—Frist, let the milk room be by itself, and free from every impure exhalation or effluvia arising from any source whatever, and let the room be frequently whitewashed and well ventilated; and secondly—let the most perfect cleanliness be observed in every thing, and by every person, about the dairy. The most scrupulous and undeviating neatness is here required, and if generally pursued, the nameless abominations that disgrace, and render unfit for use, so much of our butter, would speedily disappear.

## Improved Implements in Husbandry.

As agriculture has gradually assumed the rank of a Science, and the necessity of its support and imprvoement has become more general, the attention of men of science and genius has been directed to the invention and preparation of more effectual implements, to facilitate and render complete the efforts of the husbandman. It has been found by experience that it is very poor policy to persist in the use of the cumbrous imperfect farming implements of former days, and that not unfrequently the gain of the crop in a single season will more than compensate for the expence incurred in procuring a new plough, harrow, roller, &c. The common farmer of our country has two extremes, or evils, to avoid in the management of his affairs; one of these is an obstinate adherence to antiquated usages and implements, simply because they are old, and he is accustomed to them; and the other is an itching desire for something new, a disposition to continual innovation and change, incurring expences in partially tried projects and implements, from which no corresponding remuneration can reasonably be expected.

But though caution is certainly necessary on these points, there are some implements of such unquestionable utility that few farmers can be justified in remaining unacquainted with their use. The *roller* is one of these. On the farm it is scarcely less necessary than the plough; and when spikes are added to it, as in the case of Conklin's press harrow, for some purposes such as renovating grass lands, it is to be preferred. There are very few fields of wheat over which in the spring the roller may not be passed with evident advantage. Meadows and pastures require its action to counteract the influence of the frost in lifting the roots of the grasses from the earth, and giving solidity and smoothness to the surface. Since the custom of manuring on the surface of grass lands, and then simply inverting the turf, has become so prevalent where corn or spring grains are to be raised, the roller is found indispensable, where it is required to have the work performed in a manner that shall ensure a crop; and it is found that the small seeds, such as clover, the grasses, &c. vegetate with far more certainty after rolling than without it. A late number of the Farmer, in a paper from a subscriber, contained directions for the construction of a roller on an excellent plan, and we are confident that few farmers will regret the expence of such an implement; always remembering that greater the diameter, the less will be the force required to move it, and the better will be its effect on the soil.

The Cultivator or Horse Hoe, is another of those tools the utility of which is thoroughly tested, and which no farmer should be without. In the cultivation of corn, or the raising of roots, the saving of labor is immense; and the performance not far inferior to hand hoeing. In crops of this kind it is necessary that the earth should be frequently moved, both to destroy all weeds, and expose it equally to the action of the atmosphere. With the cultivator and a horse one man will produce more effect in this way than half a dozen in ordinary cases without it; and it is becoming of still more importance since it has been discovered that the hilling of hoed vegetables may in most cases be well dispensed with.

Other implements of this same class, and which recommend themselves for their labor-saving properties, will readily suggest themselves to the practical farmer. Of this kind are the *Drill Barrow*, indispensable in the proper cultivation of roots; the *Horse Rake* which extensively economizes labor at times when it is most valuable; the *Straw Cutter*, which by substituting straw for hay in feeding animals when mixed with grain or roots, has materially added to the profits of the farmer; and others, including improvements essentially adding to the value of many of those in most common use.

## LIME.

Lord Dundonald of Scotland, many years since recommended that unburnt limestone, finely broken by pounding, should be applied to land in the place of that which had formerly been burnt, maintaining that it would be equally efficacious, and much cheaper. Many mills for pounding or pulverizing the stone were erected, but the practice did not seem to sustain the theory, and the practice was gradually superseded by a return to the old system of burning. That pulverized limestone would be beneficial to soils destitute of lime, or too close and compact, there can scarce be a doubt; in the first case, lime undergoes a slow decomposition when exposed to the air and tillage by attrition, and presenting new surfaces would have a tendency to hasten the process; and in the second case, it would act mechanically as a divider of the soil, preventing adhesion, and rendering it more permeable. The action of lime must, however, in either of these ways be slow, and somewhat uncertain; but the reason why lime when burned should be preferable to that which is merely pulverized, has lately been explained on chemical principles, & we think in the most satisfactory manner.

Lime is composed of atoms of calcium or pure lime, and atoms of carbonic acid, the resulting carbonate, somewhat varying in its proportions of these two ingredients. Pounding does not separate these atoms and prepare them for forming new combinations in the plants or in the earth; it is the attraction of aggregation, not the attraction of cohesion, that is overcome by pounding, and this last effect must be produced before the full benefits of lime can be experienced.

Burning destroys the cohesive principle, and leaves the lime and the acid at liberty; and a substance possessing new properties, and capable of solubility in water, is now formed. This conversion is effected when mixed with the soil, and the super-carbonate thus produced "acts beneficially or injuriously, as the quantity is in accordance with the actual wants of the plants, or in excess, as other stimulating manures do." There is very little danger, however, that lime, when converted into a super-carbonate, will be applied to the soil in excess, and a writer in a Pennsylvania publication says that for a number of years he has used but little that has not lain from three to twelve or more months after burning, and has of course been converted into a super-carbonate by the operation of the atmosphere. The more the properties of lime are investigated, and its qualities ascertained, the more certain it appears that this substance, though less in quantity than either sand or clay, acts a much more efficient part, in the process of vegetation than these; and the importance of it in the processes of agriculture are becoming more and more apparent.

### Introduction of Tropical Plants into the U. States.

By the kindness of J. W. Allen, Esq. Member of Congress, we have been favored with a copy of the Report of the Agricultural Committee in the National legislature, and find it to contain matter of much interest to the country, particulary the Southern portion of it. The Report is mostly confined to the petition, of Dr. H. Perrine, U. S. Consul at Campeachy, praying for aid to establish in Florida a garden for the propagation and extension of various tropical plants of great value to agriculture and the arts, and to the papers accompanying and recommending such an establishment.

For several years past Dr. Perrine, with a laudable zeal, and at great personal expense and risque, has been forwarding such trees and plants as he deemed most valuable and suitable for cultivation in Florida and Louisania to Key West and New Orleans; and valuable establishments had been commenced at Key West and Cape Florida light house, when the breaking out of the Florida war, by driving the whites from the main land, left the plants exposed to the depredations of the Indians, and it has been ascertained that many of them have been injured if not entirely destroyed.

Dr. Perrine in 1832 made application to Congress for a tract near Cape Florida, to be devoted to such an establishment, and a report favorable to his petition was made, but was not acted upon, and the troubled state of affairs has caused the matter to sleep until the present time. He has now revived it, and the report embraces most of the matter furnished at the first period to asssist the decision of congress, together with the numerous new facts that have since contributed to demonstrate the feasibility and utility of the scheme. Satisfied on these points, the Report states: "The committee also are induced to believe, that the lands asked for by the memorialist are of but little value, and, if applied and improved as by him proposed, the public lands in their vicinity might be enhanced in value, and thereby no pecuniary loss would be sustained by the Government. They have therefore, unanimously agreed to report a bill setting apart for this object one township of the public land south of the 26th degree of north latitude, in East Florida, upon condition of its occupancy and successful cultivation, within a limited period, and under certain restrictions and conditions, as set forth in the bill."

As eighteen or twenty millions of acres of land will be in all probability ere long at the disposal of government; and as the investigations which have been made during the progress of the Seminole war, prove that much of the territory is unfit for, and incapable of producing any article now cultivated in the United States, while it is adapted to the growth of many plants that flourish in the swamps and lagoons of Campeachy, policy would recommend that an effort at introducing such plants shou'd be made, as well as those tropical ones that flourish in drier soils, and at greater elevations.

Perhaps there is no citizen of the United States so well qualified to carry such a project into execution as Dr. Perrine; his familiar acquaintance with botanical science and studies; his long residence at Campeachy, and intimate acquaintance with the inhabitants, and the best means of overcoming the deep rooted jealousy so inherent, in the Spanish character against allowing other nations to share in the plants or products of their soil, and of which some amusing examples are given in the memorial and report; and his means of judging as to proper temperature and climate, all mark him as the proper individual to conduct such an establishment.

Among the exotics which may be introduced, and to which more or less of the territory of Florida and Louisiania is adapted, Dr. Perrine mentions the beautiful and extensive family of the Palms, the Agaves, (or aloes) the shrubs for Chocolate, Coffee, and Tea, the Logwood, Fustic, Cochineal, and other dyes of Mexico, Guatemala, and Brazil; the Cinnamon, Pimento, Ginger, and other Spices of the East and West Indies; the Mahogany, Cedar, Ebony, and other precious woods of all parts of the world; the Bananas, Anonas, Mangoes, and other delicious fruits; the Peruvian bark, Sarsaparilla, Canela, and innumerable salutary Medicines for the removal of disease.

One of the most important of these plants, in the *Agave Sisalana*, which furnishes from its leaves, the material for what is termed grass rope, and of which such quantities are annually consumed. There can be no doubt that its culture might add an entire new staple to the planters of the south, and a new and cheap material to the manufacturers of the north; one which will supply many wants of our merchant vessels and navy, as well as contribute to the convenience of the community in general. So with the article of sugar, of which we import some 100 millions of pounds annually in addition to 70 or 80 millions of pounds produced in Louisania, and 50 millions made from the maple. South Carolina, Georgia, Alabama, and Mississippi, are unfit for the cane to any extent, and the immense tracts of poor sandy soil found in most of these states, have been a serious drawback to their population and prosperity. According to the memorial—"The sugar Palm on the poorest lands of Georgia, will be more profitable than the sugar cane on the richest loams of Louisania." Crawford, in his work entitled 'Sugar without Slavery,' says "Palm sugar, (not cane sugar) supplies the great consumption of the people of the East Indies, in the poorer and more mountanious countries, and as the palms are the produce of poor soils, and the labor is so small, and the quantity of saccharine matter from them is so great, the palm sugar is produced at half the cost of cane sugar, of the same degree of purity, or for about one penny a pound."

We shall be glad to learn that Congress have passed this bill, and thus done their part to advance what may properly be considered a national object. Possessing as the United States do, all soils and all climates, we should ascertain what foreign plants and productions are the best adapted to them, and by such cultivation render ourselves as far as practicable independent of the whims and caprices of the world. Dr. Perrine certainly deserves the thanks and encouragement of the country, for the judgment, skill, and perseverance which, under discouraging circumstances, he has shown in advancing the object of his labors, and we trust will yet receive the most gratifying proofs that his exertions are successful as well as properly appreciated.

### A PORTRAIT.

We copy from an English volume, (Rural Life in England, by Howitt,) the following description of the farm servant or common laborer of that country, and we particularly ask the attention of the American farmer to its statements. We do not call such a laborer a *slave*, because he is at liberty to get away from such a state if he can; but we may with propriety inquire in what respects he is superior to the despised and pitied American slave. There must be a sad defect in the system of education in any country, where its free laborers can have such degrading truths asserted of them, and not a note of disapprobation or disproval heard from any quarter. Liberty is the birth-right of the American; but if, by a neglect of education, by despising knowledge, by scorning the means which books and papers put into his hand of informing and elevating the mind, he sinks himself to the level of the brute, he alone must suffer the consequences, and pay the penalty. Here no one can have an excuse for ignorance; the village or district school brings the means of learning to the door of the poorest man, and in the school his children are on an equality with those of the rich, and the history of our country's great men proves that here is the place in which is laid the foundation of their eminence.

"From his early youth to manhood the farm servant, or laborer, is learning his business, but he is learning nothing else;—he is growing up into a tall, long, smock-frocked, straw-hatted, ankle-booted fellow, with a gait as graceful as one of his own plough-bullocks. He has grown up and gone into service; and there he is as simple, as ignorant, and as laborious a creature as one of the wagon-horses that he drives. The mechanic sees his weekly newspaper over his pipe and pot of beer; but the clodhopper, the hawbuck, the chopstick, the hind, the Johnny-raw, or by whatever name, in whatever district, he may be called, is every where the same;—he sees no newspaper, and if he did could not read it; and if he hears his master reading it, ten to one but he drops asleep over it. In fact he has no interest in it. He knows there is such a place as the next town, because he goes there to the statutes, and to the fair,—and he has heard of Lunnun, and the French, and Bonaparte, and of late years of America, and he has some dreamy notion that he should like to go there if he could raise the wind, and thought he could find the way—and that is all he knows of the globe and its concerns beyond his own fields. The mechanic has his library; and he reads, and finds that he has a mind, and a hundred tastes and pleasures he never dreamed of before. The clodhopper has no library, and if he had, books, in his present state, would be to him only so many things set on end upon shelves. He is as much of an animal as air and exercise, strong living, and sound sleeping can make him, and he is nothing more."

### Roots versus Hay.

We take the following from a report made to the Massachusetts Ag. Society, by the Messrs. Colts of Pittsfield, Berkshire Co. and we do it to show the immense advantage made in substituting roots for hay in feeding cattle, as well as in the quantity of ground necessary to produce a given quantity of food.

The writer says—"My stock now consists of 1000 sheep, 8 young oxen, 6 cows, a pair of horses, and a single horse. I have raised this season for the use of my stock 5544 bushels of vegetables, and all to be grated and fed out with cut straw, the cattle constantly, the sheep one feed a day, which seems to be a necessary food in our long cold winters: it keeps them in health and also in flesh. As to the respective value of the vegetable food, the following statement will perhaps best exhibit it. I have commenced feeding and shall continue to feed,—

14 head of horned cattle with 20 lbs. of cut straw each per day, 4 cents for each twenty lbs. 56 cents. Also to each, 113 lbs. of roots grated, mixed with straw, 3 cents, 42 cents. And now allow 150 days for the season of feeding at 98 cents, is $147,00. The same stock would require 20 lbs. of hay each per day for 150 days; they would consume 42,000 lbs. equal to 21 tons; at the moderate price of $10 per ton $210,00. Balance in favor of root feed 63 dollars, and I am sure the stock will appear far better at the opening of the spring.

You will perceive that the respective value of vegetables for food is six cents a bushel, while hay is at ten, and straw at four. It may be said that there is some cost in preparing food; but this is more than compensated if properly done by the extra quantities of manure made."

Thus it appears that 20 lbs. of straw and 8 lbs. of roots mixed, afford more nutriment, and of course are more valuable than 20 lbs. of good hay, while the actual cost is much less. Fourteen or fifteen tons of roots are a moderate crop per acre, while the average of hay will fall considerably below two tons to the acre. The advantage in favor of the turnep is thus perfectly apparent, and the farmer who persists in mowing his twenty or forty acres, and keeping his stock on hay, when five or six of these same acres would furnish roots sufficient, if mixed with the straw which might be grown on the remainder, to keep his animals far better than the hay, and leave the grain crop nearly as a clear profit, is clearly acting against his true interests. Again we say to our farmers, you did well last year by so extensively entering upon the culture of roots; you will do better this year by greatly extending their cultivation.

### Bread in Paris.

The annual consumption of bread in Paris is computed by Dr. Bowring at 297 millions 272,732 lbs. of the value of £2,052,400 and the consumption of flour in pastry and various other ways, is 37,145,732 lbs. of the value of £220,800 making the total value £2,273,200 and the total quantity, 434,000,000 lbs. If the annual expences of each inhabitant of Paris be divided into 100 parts, 19 of them, or nearly one fifth, are occasioned by the consumption of bread, 22 parts by the consumption of meat, and 27 in wine and spirits. Much greater quantities of bread are used in Paris according to the population, than in the cities of England or this country, the working classes frequently dining on bread and fruit, or a little cheese, while the English or Americans substitute meat in large proportions.

The price of bread is regulated in Paris twice a month by the police; and is of an excellent quality, while it is from 50 to 60 per cent cheaper than in London.

## COMMUNICATIONS.

### Bement's Improved Drill.

Mr. Tucker—In the 18th No. of the present vol. of the "Genesee Farmer," in your article on "Turnep Culture," I see you have given a pictorial representation of my Turnep Drill, which I much regret, as it may lead to great disappointment, for I have not manufactured any of that description since 1836, and Mr. Thorburn has received orders already for several.

If you will turn to the 2d No. of the 4th Vol. of the Cultivater, you will find another cut representing my "Improved Turnep Drill," by which means other seeds may be sown with it; and a better, more substantial, more expensive article, and the price advanced to ten dollars.

This drill is much approved of, being sure in operation—sows about three quarters of a pound of ruta baga seed to the acre, in rows thirty inches apart—is simple in construction and durable.

In October last, it took the first premium of a silver medal at the "Fair of the American Institute," and a premium of five dollars at the fair of the "Berkshire Agricultural Society," at Pittsfield, Mass.

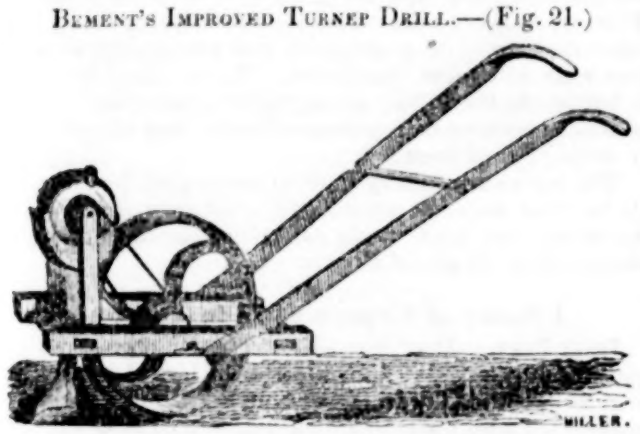
I have made some further improvements this spring, but the price remains the same.

Very respectfully, your ob't serv't,

Caleb N. Bement.

*Three Hills Farm, Albany, May* 20, 1838.

Bement's Improved Turnep Drill.—(Fig. 21.)




The above cut represents Mr. Bement's "Improved Turnep Drill," the principle of which differs but little from the one described in the 18th No. of the current vol. of the Genesee Farmer. The improvement consists in substituting copper and block tin in the place of a tin cylinder—with large holes for mangold wurtzel, beets, and small peas—with a band which can be slipped over the large holes, in which are pierced two sizes of smaller holes, the larger size for onions, carrots, and other seeds of a round or oval shape, not larger than onion seed; by slipping the band, and placing the smallest sized holes over the larger, it is then prepared for ruta baga, and seeds of the same size.

The wheel by which it is impelled, serves the double purpose of covering and pressing the earth to the seed, thereby causing a much more rapid vegetation.

The objection to the former coulters, through which the seed dropped, is completely obviated in this—for the coulter and seed tube are separate, which renders it almost impossible to fill with earth.

Another advantage this has over the former, is, the coulter being in front of the wheel, gives it the advantage of running close to a fence or tree.

It is very substantial and durable—the wheel is of cast iron, 16 inches diameter and 4 inches broad.

They are for sale at William Thorburn's Agricultural Warehouse, No. 317 N. Market-st., Albany—price $10.

### "Newspaper Borrowing."

Mr. Tucker—Much has been said in political and religious newspapers, and with peculiar force, upon the practice of "Newspaper Borrowing;" yet, sir, the force of the arguments has not been sufficiently realized in this section of the country. The "Genesee Farmer," with which I am favored, is an agricultural paper which ought to be preserved by every subscriber, (and every practical farmer should be a subscriber,) for binding at the close of the volume, thus furnishing every farmer with a cheap and beautiful '*text book*,' as it were, of 416 pages. But, sir, so long as the practice of "borrowing" is persisted in, so long this object will be defeated.

Tired of confinement, and worn out in collecting newspaper accounts;—sick and emaciated in my person, I left the ranks of the *Printer*, and have concluded to become a practical farmer, since which time I have received the Genesee Farmer. Therefore, you may naturally imagine that my feelings are sensitive on the subject under consideration, when I am so boldly met by these newspaper borrowers. When I have endeavored, with all the magic skill of which a publisher is master, to persuade my neighbors to become interested patrons of the "Gen. Farmer," it is mortifying—it is *soul-stirring* to be met with the cunningly-devised response—"*Oh, I can borrow your paper!*" I have been flattered with the hope of '*baiting*' them, and have lent my papers until Nos. 1, 5 and 15, have been lost or destroyed.

"Newspaper borrowers" have no kindly feelings for the '*poor Printer*,' else they would subscribe for an Agricultural paper themselves, and not be under the painful necessity of filching all of their information upon the subject of improving their farms, their crops and their stock, from their neighbors. They are equally fond of every improvement at which they can catch a glimpse, and still they are unwilling to improve their own minds and manners by subscribing, and *paying*, for an agricultural paper.

In short, Mr. Editor, "Newspaper borrowing" should not be tolerated by any wealthy, practical farmer. There is, in fact, no farmer, however limited his circumstances, but will be richly paid for his expense and trouble in procuring an agricultural paper, and adopting the *system* of farming. The "Genesee Farmer" has been, and will continue to be, the great channel of agricultural knowledge in Western New-York, and no farmer should be without it. Abandon, then, at once, the practice of "borrowing" an agricultural paper, if you wish to prosper.

*May* 16, 1838. A. H. Burdick.

### HOOF-AIL.

Mr. Tucker—Inasmuch as there are different opinions in relation to the true cause of hoof-ail in cattle, perhaps it may not be amiss to lay before the readers of the Farmer some facts which go strongly to show that it is caused by the ergot of spear grass.

On the 24th of March, T Hale, of Scipio, Cayuga Co., purchased a stack of hay containing a considerable quantity of spear grass, which is loaded with ergot, as the sample I send you enclosed will plainly show. He separated two cows from the rest of his stock, and drove them one mile distant to another barn. It may be proper to mention, that his cattle were all in good order at this time, and no indication of disease among them; and further, that those left at the barn where they were kept during the winter, are now in good spring condition. The two cows mentioned above, were fed on the hay he purchased, and in eight or nine days after he commenced feeding them, they were affected in the hind feet with lameness and all the symptoms of the hoof-ail. About this time, Mr. Hale's hired man drove *his* cow to the barn and foddered her with the same hay. In eight or nine days, she was affected in the same manner. Every remedy recommended in the Farmer was applied, but to no effect. One of the cows was equally affected in the *fore* feet and legs. Her hoofs came off and her legs were completely dead below the knee and gambrel joints. The fore legs were so badly cracked at the knee joints, that a slight wrest would have separated them from the remainder of the limbs. This one has been killed. The other two will undoubtedly follow the same fate, as their hoofs are off, and their legs will eventually crack off some three or four inches above the pastern joints. Mr. Hale thinks the hay affects his horses, as they grow poor, though he feeds them more grain than he has usually, to keep them in good order.

Perhaps it may not be out of place, to mention an incident which happened a few days since in relation to the poisonous effects of ergot. A lock of this hay was thrown into a pen where a rabbit was confined, and in a day or two the rabbit died. Whether it was the ergot that caused its death or not, I will leave undetermined.

*Ledyard, May* 21, 1838. Jno. B. Bowen.

### Experiment with Potatoes.

Mr. Tucker—I have had the pleasure of reading your Monthly paper, and am much pleased in reading of the large crops of produce that have been raised by the farmers of my native state, (New-York.) The crops of potatoes that are mentioned, come so far short of what we can do in Ohio, that I will state the produce of six square rods of ground I planted last spring for the purpose of proving what quantity of seed was best for the culture of potatoes. My ground was sand and gravel, well manured green sod, turned over the fall previous to planting. In the spring I harrowed it, and ploughed it twice; the sod had well rotted, and it was perfectly fine. I furrowed it deep, rows three feet apart, and planted the rows across, 2½ feet apart, filling up the furrow even with the surface of the ground. I cut my seed so as to have but one eye on a piece, and laid four pieces so as to form a square exactly one foot, and then laid one piece in the center. I covered them about four inches deep. I hoed them as soon, the first time, as they could fairly be seen; the second time, when about one foot high. The tops grew full seven feet long, and when I came to dig them, I had a yield of forty-six bushels from the piece. The best four hills I could find turned out 1½ bushels.

This spring I intend to plant half an acre upon the same plan, and I will give you the result next fall.

*Huron Co., Ohio*, 1838. Vermillion.

### Wintering Sheep on Browse.

Mr. Tucker—My brother from Halifax, Vt. being present last evening, conversing with one of my neighbors on the importance of agricultural publications, observed that he had taken a paper of that character a few years past, and stated that by the information derived therefrom, he made a saving in one winter, besides paying for the paper, to the amount of ten dollars. Being short of hay, he cut hemlock for his sheep, sticking the limbs into the snow for the sheep to browse, when the snow was not too deep for them to get about conveniently. When the snow became too deep to pursue that course, he sledded the boughs of hemlock into his yard, placing them in the most advantageous manner to feed upon, and in a manner to prevent them from being too much trodden under their feet, giving them a very little hay night and morning, and a few oats. Some of his neighbors predicted he would raise no lambs, but that proved to be a mistake. He states he never had better luck, or a finer lot. M. B.

*Monroe, Franklin Co., Mass., March* 12, 1838.

### Cure for the Horn-Ail.

A piece of saltpetre as large as a walnut, a spoonful of salt, and one gill of vinegar, mixed together. Divide into three parts—pour it into the ears of the animal three mornings in succession. Also one quart of milk and half a pint of soap, mixed and divided into three parts, and poured down the animal at the time of pouring the other into the ears, or soon after.

This method has been practiced here, and I believe has effected a speedy cure in every instance, at least that has come under my observation. A. F. G.

*Springport, Mich., April* 13, 1838.

### MILLER'S TOLL.

Mr. Tucker—There are some errors in the article on Miller's Toll, Monthly Far. No. 5, p. 76, col. 2, the 36th line from the top down, should read thus—"Also if the bolting machinery is patent, it is more than double the cost of the grinding machinery. I did not mean that their bolting machinery was patent, only that if it was.

Again, the 48th and 49th lines from the top, should have been printed thus—"Grain ground coarse for stock-feeding, is half of the toll, except oats and barley, which is 1-8 for toll," &c. I meant 1-8, not 1-3, as it is printed. Grain with the husks on it, does not grind or feed in the mill as well as clean grain does, is the reason that it is taxed with full toll for feeding. John W. Luff.

*Spring Mills, May* 1838.

### Hoof-Ail,

Is not common in this country, and has been generally fatal, but I have heard of its being cured when taken at an early stage, by a plentiful application of tar. J. A. J.

*From the Wheeling (Va.) Gazette.*

### Blight in Pear Trees.

A clever writer in the Genesee Farmer truly observes, that "this disease has had as many causes assigned for it as there are theories for the formation of the globe, and some of them about as preposterous; and, like Macbeth's witches, 'come, like shadows, to depart.'" Nevertheless, I will venture to offer another, and one which, I hope, will settle the question.

My opinion is, that blight takes place only in such trees as have imperfect *tap roots*, or none at all. In this part of the country it is the common practice, and, I presume, it prevails elsewhere—to propagate pear and quince trees from sprouts; and hence, these are more afflicted with the disease than apple trees. The remedy, then, is to plant the trees when quite small—plant only seedlings, or such as have been grafted on seedling stocks; or, what would be still better, plant seeds at proper orchard distance—this will prevent the necessity of transplanting, which always, more or less, injures the tap root. When the trees are the proper size, graft them. I intend to plant an orchard of pear trees in this way, and when they arrive at "a good old age," free from blight, my theory will be believed, if not before.

That I have assigned the true cause of the disease, and pointed out the only effectual remedy, I entertain scarce the shadow of a doubt. I am surprised that it did not occur to me until a few days ago, or that the discovery has not been made by others long since.

The tap root is of more importance than is generally supposed. If a fruit tree, after coming to mature age, does not blossom, which frequently happens, owing to a redundancy of nourishment, bore a hole in the tap root, and it will thenceforth be fruitful; but, in all probability, you shorten its life by the operation. I mention this fact as a proof that the tap root affords a large portion of the sap of the tree. And now let it be observed, that when a tree is affected with the blight, the sap stops short in its ascent, not owing to any defect in the cellular system, but because *the roots are unable to send it the full distance:* and in the name of Pomona, is this to be wondered at, when the *primary* root is missing or defective?

Philosophers have not yet agreed as to the cause of the ascension of sap. Is it not probable that they are all wrong, and that, contrary to all their opinions, it is *forced* up by some unknown power? How else could sap rise forty-three feet in a tube attached to the end of a cut vine? This experiment has been tried, and I believe is pretty well attested. If, then, the sap is forced up, may not the propelling power be greater at the tap than at the lateral roots, and always adequate to send it to the uttermost extremities, which is all that is necessary to preserve the tree from blight? But what is the use of *theories*, when we have *facts?* It is well known, that the tap root penetrates deep into the earth; that it is always plentifully supplied with moisture; that the quantity of sap it supplies is uniform, neither increased by rain, nor diminished by drouth; and on it must the tree chiefly depend for a regular supply of nourishment, adequate to the support of every branch.

To test the truth of what I have said, let those interested in the matter examine the roots of their blighted trees. This may easily be done, for many of them must be dug up, as they "cumber the ground;" and if one can be found with a perfect tap root, I will yield my theory; but if, on the other hand, all blighted trees are found defective in the primary root, I will contend that it is established.

An important question arises, how are we to preserve the defective trees we now have, until we can get better ones? I answer, protect the secondary roots in such a way, that they may be able, in some measure, to perform the functions of the primary one. This can best be done by putting plenty of litter around the trees to a considerable distance, or as far as the roots extend, such as chips, &c.; any thing that will absorb a portion of the rain, and prevent evaporation from the earth in dry weather.

*Grave Creek, May* 9, 1838. R. I. CURTIS.

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*From the New England Farmer.*

### Bone Manure.

MR. EDITOR—I have been requested to state my opinion and experience as to the value of bones, and especially *crushed* bones, as manure. It always gives me pleasure to see the progress of Agriculture in our country, and the recent though tardy introduction of the practice of applying bones as manure is among the proofs of that progress. As to my *opinion*, it would be presumptuous in me to fortify the authority of every European and American writer, for the last century, by my humble suggestions. The Rev. Henry Colman has, in a late treatise, summarily stated the general opinion and experience on that subject. In the sentiments expressed in that treatise, I fully coincide, except, that my experience does not support, but goes to contradict one suggestion made by Mr. Colman, to wit: "that on *wet* and heavy soils they *will not answer*." My experience goes to show, that it is eminently useful in wet soils, though I have never tried it on heavy or clayey ones.

Although I should think my opinion of very little weight on this subject, yet as there is at present a very limited use of bones, and perhaps some degree of incredulity as to the extent of their value, I cheerfully state, at large, my own personal experiments which have been extensive, and of considerable duration. About 10 years since, the Hon. Mr. Ellis of Dedham, advised me to try bones upon my wet meadow, confidently assuring me, that I should find them very useful, and that they would materially increase the crop. But I, like most others of us old farmers, was averse to new and untried experiments, and neglected his advice. The following year he earnestly repeated his advice, and I *as obstinately* failed to adopt it. Soon after the second advice, I saw a plain farmer carting by my door a load of ox's head bones with a five cattle team. My conscience smote me for my neglect of Mr. Ellis' advice, and I stopped the driver, and the following dialogue took place. "Pray, friend, how far, where, and for what purpose are you carting those bones?" "To the edge of Dedham, about eight miles from hence, and to spread on my wet meadows." "Did you come down *empty* and for no other purpose?" "Yes, I came down solely for this load." "How much did you pay for them?" "Two dollars and fifty cents." "Have you tried the experiment before?" "Often, and my neighbors have tried it." "How long do the good effects last?" "I should say six or seven years." "Well, you think yourself well paid for a day's work for self, and large team, and the price of the bones, by the good effects on your wet meadows?" "To be sure I do, or I should not come for them so far, you may depend."

We parted, and the following dialogue took place between *myself* and *me*, though inaudible. What a negligent and obstinate fool I am! Here I have read during forty years in the most approved English and French writers on agriculture, of the great value of bones as manure; an enlightened farmer of my own vicinity advises me to try them, and I have neglected the trial.—Now here is an uneducated farmer, much bolder than I am; surely, if he can afford to cart bones eight miles, and come down with a large empty team to fetch them, I can afford to send 50 or a 100 rods for them, and I blushed for my negligence, and sent at once for 6 or 7 loads of them. I have applied them to my wet meadows for 7 years last past, and I can affirm, that I know of no manure so beneficial, of *equal cost*, still, in the coarse state, in which we *then* procured them, they were not applicable to *upland* cultivation. But having heard in the spring of 1837, that there were bone mills set up in New-York, I was upon the point of importing a ton of bone dust for experiment, when I heard that my neighbor Nahum Ward had commenced crushing bones for manure. I immediately sent for 20 bushels, and tried them as follows:—On summer squashes in the hill with rich earth; on string beans, also mixed with earth. In the former I applied them to the holes in which the squash seeds were sown, about a shovel full to each hill; for the beans, they were sown in the drills. I tried them also on beets and carrots, in drills, and on all my winter squashes. On dahlias, on orange trees, on grape vines, and many other things, and I can safely affirm, with great and uniform success. They are an exceedingly powerful stimulant, full as much so, as slaughter house, or horse manure. If I am asked, whether they are as durable as the *last*, I should say, no. It is quite impossible that they should be so—but on lands deficient, or as mine are, *wholly destitute* of lime, they may be more permanently useful. For my land, gypsum or plaster of Paris, produces as great and visible effects as it does in any part of the interior country, on grain crops, and on clover and lucern. JOHN LOWELL.

*Roxbury, May* 5, 1838.

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### PARSNEPS.

There is much reason to regret that this vegetable is not more cultivated among us; and that its value for feed of cattle has not been tested. We have never known a case in which it has been made the subject of field-culture; and no one thinks of raising more than a few for table use in the spring. Our own cultivation has never extended farther than to the growing of thirty or forty bushels in a season; but we cannot say why, excepting from sympathy with general prejudice and custom, we have not pursued it much more extensively, as we recollect having fed them to milch cows in the spring with very great advantage to their health and milk.

The cultivation of them is more easy than that of carrots; and the yield upon an acre is greater. The carrot plant when it first appears is not so distinguishable as the parsnep; and the weeding and thinning therefore are more troublesome. The digging of parsneps is more difficult than that of carrots; but if planted on ridges, it may be greatly facilitated by means of a plough; and after all, the extra labor required is not a matter to be much considered. The parsnep likewise may be safely left in the ground until the spring; and then it furnishes in perfection a succulent food for cattle of the highest value, and at a season when it is particularly required. The butter made from the milk of cows fed upon parsneps is said to be distinguished by its fine flavor; and in parts of Europe, where it has been cultivated as a field crop it is stated that no vegetable food will produce more or finer beef or pork. There is no vegetable which is less liable to accident; none for which a suitable soil is more easily found; and none which requires less expense of seed. They are cultivated in the same way as carrots; and we recommend for all vegetables that they should be sown on ridges, and in as straight a line as can be drawn. For parsneps as well as carrots, as there is always a liability to sow the seed too thickly we advise mixing the seed with a considerable quantity of dry sand; and it may then be sown evenly either with the hand or a machine. The human hand however, where there is not too much to be done, is doubtless the best of all machines. We advise likewise that carrot seed should be moistened before sowing. It will then appear early above ground before the weeds show themselves. We cannot say that the same method would not be advisable in regard to parsneps. We recommend that a trial should be made; but we have made no experiment of this matter ourselves. Parsnep seed is usually long in coming up; and on account of weeds it is very desirable to forward them.

Parsneps may be sown in the autumn or the spring.—The almost universal opinion is, that if sown in the spring it is indispensable that they should be put in very early. We have the testimony of two or more intelligent farmers, that they have succeeded better by late sowing than by early; and they avoid sowing until the last of May. This was a new fact to us. In this case we should deem it the more desirable if possible to forward the seed by some artificial means before planting.

It is stated that upon analysis parsneps yield 99 parts of nutritive matter to 1000, and that of these 9 parts are mucilage; the rest saccharine matter. As an article of human food they are not a favorite with most people. This, we believe, arises from their infrequent use. Probably they are quite as palatable and acceptable as potatoes were when first introduced. When sliced and fried in butter like the salsify or vegetable oyster plant, which is so much esteemed by persons of *taste*, they are not easily distinguished from it.

The leaves are said by some to make good feed for cattle, but this does not accord with our own observation. As far as that goes, cattle are seldom inclined to touch them.—*New England Farmer.*

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### Efficacy of Gypsum sown in Autumn.

JESSE BUEL,—Dear Sir,—I address you now simply to give you the result of an experiment which I made last year with gypsum. In October, 1836, I sowed about six bushels per acre upon part of a field sowed to wheat early in September. The land was a mixture of sand, gravel and loam. It had laid several years in timothy. In the spring it was ploughed, and oats, corn and peas put in. Part of the field I applied no plaster to. The difference between that sowed with plaster and that on which no plaster was sowed, was quite one-half in favor of the former. That which was plastered produced a vigorous growth of straw, while the heads of wheat were much longer and fuller than that which was not plastered. By sowing in the fall, the gypsum becomes, from the action of the fall and winter rains and snow, perfectly dissolved, forms a chemical union with the soil, and affords to the wheat plant its natural food. When sowned in quantities from five to six bushels per acre, the benefit is felt on the subsequent crop of grass.

From experience I am satisfied that gypsum ought to be applied on timothy and other grass meadows, in much greater quantities than are usually put on clover. Gypsum when sowed in large quantities on a clay soil, ameliorates it. Upon a few yards of stiff red clay I spread about half a bushel of plaster last spring; in the course of the summer the color of the soil changed to a dark brown, and the clay pulverized, lost its tenacity and became, when dry, almost as light as ashes. I agree with you in your opinion as to the manner in which plaster benefits different crops. Of some plants, such as corn and clover, it constitutes the specific food. But others, such as timothy, wheat, oats and barley, it benefits by its chemical action on the soil as well as by furnishing lime to those which require it. The wheat crop, as far as I have observed since the snow has left us, looks well.

Your obedient servant,

SAM'L. J. BAYARD.

*Seneca-Falls, March 13th,* 1838.

REMARKS.

The suggestions in the preceding communication of Mr. Bayard are very important to the farmer. They go to render probable, what before was doubted, that gypsum may be advantageously applied to clays, if applied in larger quantities than usual; that it has a chemical action upon the soil, and is thus indirectly and highly beneficial to crops upon which it is believed not to have any direct action The improvements it suggest are, 1. To sow gypsum in the autumn, or early in the spring; and, 2. To sow it in larger quantities than usual upon clays.

We sowed plaster upon our meadows in April, and upon two or three ridges the quantity was doubled, i. e., at the rate of two bushels the acre. The crop upon these ridges was nearly double what it was upon the rest of the field. Soil, clay loam.—*Cultivator.*

### Manning's Book of Fruits.

Mr. Robert Manning of Salem, well known to the horticultural community, and distinguished for his skill and public spirit in the introduction and cultivation of fine fruits, has just published a "Book of Fruits—being a descriptive catalogue of the most valuable varieties of the Pear, Apple, Peach, Plum and Cherry, for New England culture, with plates." The book is well printed; the plates do credit to the engravers; and the information contained in the book is adapted to be highly useful. 'Fruit,' says some one, 'was the food of paradise;' and ripe fruit of every kind we believe is as conducive to health as it is agreeable to the taste. At the same time to persons living in the country, it is among the cheapest of all luxuries; and what can we offer to a friend who visits us, which will ordinarily be received with more grateful delight than a plate of delicious fruit, or a bouquet of choice and brilliant flowers; for look at the lilies of the field, how they grow; and Solomon in all the gorgeousness of oriental magnificence was not arranged like one of these.

The book contains a brief account of the Pomological Garden commenced in North Salem in 1823, with the design of forming a collection of specimens of foreign and native trees as would endure the severity of our climate. With the exception of Peaches, the book recommends no fruit that will not ripen in any part of New England, or New York and the southern part of Canada, and no specimen is described in these pages, which has not been identified beyond a reasonable doubt of its genuineness.

There is one statement in the preface which we cannot refuse ourselves the great pleasure of quoting. "We well remember the discouraging advice that we frequently received at the beginning of our course as a cultivator. We were too old, it was said, to expect to reap in our own person, the fruits of our labors; yet in spite of these and many other prophecies of the same nature, we persevered and have not only had the satisfaction of raising a great variety and abundance of fine fruit, but of producing from the seed, the Apple, Pear, Peach, Plum, Cherry, Nectarine, and Currant. * * * * * * * * We mention these seminal productions only to show that our labors meet a speedy reward; and that a person is seldom so advanced in life that he may not look both for requital and gratification in so laudable a pursuit."

The book contains much useful information respecting the cultivation and management of Fruit Trees, under the heads of Root, Manure, Transplanting, Grafting, Budding, &c. from which we design on some future occasions to enrich our columns. In the mean time, we recommend to every man, delighting in a garden, and having a desire to cultivate fine fruit without risk in mistaking its character and to understand the cultivation of a tree or a vine, to obtain this book. It is a substantial benefactor to the community and deserves the liberal patronage of an intelligent public.—*New England Farmer.*

### Patent Banking and Ditching Machine.

We had an opportunity of seeing on Monday, in full operation, a machine for digging ditches, and at the same time making embankments or dykes, which surpasses any thing of which we had formed any conception. The contrivance consists of a wooden foundation of about twelve feet in length, at one extremity of which are two uprights. In these uprights an axle revolves, on which are two arms of cast iron, having at the extremity of each a cross-piece furnished with four or five teeth, as they may be termed. Inside of these cross pieces are buckets that receive the earth loosened by the teeth, and, as the axis revolves, deposite their contents on an inclined platform, from which the earth passes and forms an embankment on one side of the ditch. The axle is made to revolve by means of cog wheels connecting it with the gearing. This gearing consists in part of an iron shaft that passes horizontally and a little obliquely in front, and is turned by a capstan. The capstan is provided with a long horizontal arm to which the horse, by which the whole machine is set in motion, is attached. In acting upon this arm the horse walks around the capstan and crosses of course the line of the ditch, but in advance of it. In order to give direction to the machine and prevent it from being drawn aside there are two guide wheels with sharp edges in the forward portion of the foundation, that cut the sod to the depth of about eight inches. The ditch on which the machine was employed when we saw it, was three feet deep, and three feet and a half wide at the top. It was excavated in an uncommonly hard virgin clay soil, such as is found on the high ground between Fell's Point and the Canton race course. At every revolution, each of the buckets is capable of taking up which the teeth above mentioned go, is graduated at will.

We were much surprised at the rapidity and perfection with which the excavation was formed, one foot of finished ditch of the breadth and depth mentioned, together with the dyke, being formed in a minute, or sixty feet in an hour. It is calculated that a single horse of ordinary strength can propel the machine during ten hours of each day, consequently the extent of trench formed would be six hundred feet. To give an accurate description of this surprising process within the limits of a paragraph, cannot be done, and, we must therefore request such as may wish to form a just conception, to witness the performance. In ditching and draining low lands, or dividing prairies where wood is scarce and the soil light or moist, the machine will prove invaluable. The inventor is Mr. George Page, of Keene, N. H. who, as we are informed, undertook to make something answer the purpose at the suggestion of a gentleman at Washington, whose residence is where much draining is required, and but little wood grows. Mr. Edwards, agent for the Sandwich and Boston Glass Company, will furnish any information required.

The above machine has been made for Col. S. D. Wilkens of this city, for the Territory of Wisconsin, in the prairie parts of which it must prove invaluable.—*Balt. Farmer.*

### Improved Smoke House.

The plan of an upper floor for smoke houses is certainly an excellent one; but our readers who have all their lives practiced smoking their bacon with green hickory wood, will shake their heads at the idea of smoking with rotten wood. Although we are in favor of the green hickory, we can truly say that we have eaten bacon at the table of the writer, as finely flavored and as well cured as ever was tasted.

Mr. Stevenson—Last summer I dined at the house of a much respected neighbor and had a good old fashioned Virginia dinner of bacon and vegetables of various kinds, with pancakes and country molasses for a dessert, prepared by a very neat hostess. I sympathised in the mortification of our excellent housewife, at seeing one at table, pick out a maggot from the salad which had been boiled with the nice looking ham.

Now housekeepers, attend to the following directions, and you will save your wives such mortifications, and get for yourselves and friends the very best bacon. Make your smoke house with an upper and open floor of joists about six feet above the ground floor; make your smoke with *rotten wood*, as fast as you can, and it will all be done in fifteen days. The advantages of the upper floor and of the rotten wood, are to be secure against fire, caused by the pieces of meat falling down, which often happens, and the smoke going on the meat *cold*. When sufficiently smoked, make as many bags as will hold your hams; then make whitewash of common thickness, into which dip the bags as well as the shoulders and middlings or sides. About the 10th of March hang all up again and make a smoke occasionally through the summer, and you will avoid loss of meat. Put no saltpetre on your meat, but wash your hams well in clean water when you first hang them up. Mr. Editor, as I love a piece of broiled ham so well, and you invite scribblers to write for your paper, and wishing every body that works hard to live well, if you think the above worth notice, why notice it—if not, throw it under the table as a bad bill. However, I invite the attention of those who have to build new smoke houses, to the plan above named. It is not too late to put your hams up for this season, as directed above. A Yankee.
—[*Franklin Farmer.*

### A Good Cow.

From the 27th of December last to the 27th of March, 12 weeks and 6 days, Mr. Aaron Colton of Conway, sold 133 lbs. of butter, made from one cow, besides what was consumed in his family, consisting of himself and wife. They judge this was from 15 to 20 lbs. Taking the least quanity, it makes a fraction over 11½ lbs. per week. The cow was kept solely on hay and a few top stalks, without meal, potatoes, or any other feed whatever, during the whole time, except *three pumpkins*. During the best of the season, the milk of four days made 8 lbs. 3 oz. of butter. Of the 133 lbs. 70 sold for 20 cents per lb. and the remainder for a shilling.—*Hampshire Gaz.*

### Corn Crop.

A farmer of Clarke county, from a field of forty acres of Indian corn last year, gathered over 3800 bushels—being ninety-five bushels or nineteen barrels of grain to the acre. This is the best crop, for a field of its size, we have heard of lately. An average of ten to twelve barrels, on good soil, is a very satisfactory result generally to our farmers. There is an absurd belief among many of them, that the additional labor, in manuring and culture, necessary to produce a larger crop than ten or twelve barrels, is not paid for by the increased product. Such sentiments as these, are fatal to every kind of improvement; and they should be met and resisted by those who are in possession of facts demonstrating their evil tendency. We hope the gentleman who informed us of this excellent crop, will procure and send us the mode of culture pursued in producing it, and let us see whether the seven or nine barrels of corn did not pay for any extra labor or manure expended on it.—*Franklin Farmer.*

### Ploughing.

Messrs. Ellis & Bosson:—We plough too often. No land should be ploughed twice in the same month—nor till the vegetable matter turned in is decomposed. People are now preparing their lands for spring sowing. We see many ploughing their last year's corn and potato ground twice over, thus bringing again to the surface most of the weeds, stalks and grass to contend with the young grain. This cannot be right. It is recommended to those who have tillage land not rocky, to harrow down well the old corn hills before ploughing; this may be done several days before the ground is fit to plough, and this process serves to let in the air and prepare the ground for earlier sowing than if let alone.

When the surface is made even, and the ground is so dry that you will not make it into bricks by turning it over, take a small plough and make the furrows fine; take care to bury all that lay on the surface; this is your manuring for this season. Sow your grain and let it have a week or two the start of the sorrell and grass, and you stand some chance at harvest time of having grain higher than the weeds. Yours, &c. W. B.
*Framingham, April 23, 1838.* [*Yankee Farmer.*

Stumps.—*Sir:* I believe that it is not generally known, that covering the tops of stumps with the subsoil, will very essentially hasten their decay. Please give publicity to this fact, as it may be of some benefit to those persons who are clearing new ground. By pursuing this process, they will soon get rid of the stumps. S. Bray.
—[*Farmers' Cabinet.*


### "Work it Right."

As there is but a poor prospect of a corn crop, every Farmer who 'works it right' will cultivate some more certain crop that will answer as a substitute.

Peas will still succeed if sown without delay; the early Canada peas are the best.

Carrots are excellent food for stock, and it is not yet too late to sow them. On deep rich light soil, with good cultivation, they will yield fifteen hundred bushels to the acre.

Sugar Beets and Mangle Wurtzel—these may also still be sown, and if the soil and season be favorable, an abundant crop may be obtained. The seed should be well soaked before sowing—and procured from the Rochester Seed Store, where all the above can be obtained of genuine quality. (June 2) REYNOLDS & BATEHAM.

### Farmers' Books.

NOTICES on the Sugar Beet, containing a description of the culture and preservation of the plant; also explanations of the process of extracting its Sugar. Price 25 cts.

A Manual of the art of making and refining sugar from Beets. Price 75 cents.

Cobb's Manual on the Culture of Silk.
Chaptal's Agricultural Chemistry.
The Complete Farmer, by Fessenden.
Fessenden's American Gardener.
A Guide to Orchardists.
Smith's Treatise on the Honey Bee.
A Treatise on Cattle.
Mason's Farriery.
Barnum's American Farriery.
Vols. 1st and 4th, Genesee Farmer, bound.

For sale by D. HOYT,
Rochester, May 26, 1838. Bookseller, 6 State st.

### Notice.

THE subscriber takes the opportunity of informing the Agricultural public, that his *Imported English Draught Horse* SAMPSON, will stand for Mares this season, the four last days in each week, commencing the first week in 5th mo. at home, the next at Henry Stevenson's in Henrietta, and so alternately through the season, ending the 4th of 7th mo. He will call at any of the intermediate places where his services may be required.

Sampson is four years old this spring, a beautiful brown bay, free from white except a small star on the forehead; is 16 hands high, compact and well shaped, weighing 1640 lbs., possessing greater muscular power than any span of horses of the same age in this part of the country; is remarkably quiet and tractable, true in harness, a fast walker, and may safely be recommended as worthy of the notice of all who wish to improve the breed of Draught Horses.

Sampson was bred from some of the best stock of Draught Horses in the south of England, and was selected and imported (last fall) by the subscriber, with great care and expense, for the purpose for which he is now offered to the public. It is the decided opinion of many qualified judges, that a cross between the Draught Horse and the light, active Mares of this country, will produce a stock of horses better adapted to the general purposes of agriculture than any we now have.

All persons desirous to improve their stock of Team Horses are respectfully invited to call and see the above horse.

Terms—$10 each colt, payable by the 1st of 3d mo. next. Old unlikely mares will not be covered, unless two dollars are paid at the time. All mares that are parted with after covering, to be considered with foal.

For further particulars apply to

JOHN ROBINSON.
Palmyra, Wayne Co., 4th mo. 26, 1838. my 26-3t

### The Ploughman.

In all pursuits by man invented
The ploughman is the best contented;
His calling's good, his profits high,
And on his labors all rely.
Mechanics all by him are fed;
Of him the merchant seeks his bread;
His hands give meat to every thing
Up from the beggar to the king.
The milk and honey, corn and wheat,
Are by his labors made complete.
Our cloths from him must first arise
To deck the fop, to dress the wise:
We then by vote may justly state
T' ploughman ranks among the great—
More independent than they all,
That dwell upon this earthly ball.
All hail, ye farmers, young and old,
Push on your ploughs with courage bold;
Your wealth arises from your clod,
Your independence from your God.
If then the plough supports the nation,
And men of rank in every station,
Let kings to farmers make a bow
And every man procure a plough. A. F. G.

### Beet Sugar.

Within the last few years, the cultivation of beets and the manufacture of sugar from them, have rapidly increased in France, and extended to Prussia, Russia, Germany, Austria and Italy.

They were first commenced in France in 1809, and under the Continental System then in full vigor began to take root but upon the entrance of the Allies in 1814, the manufactories with one or two exceptions were closed and the culture abandoned. During the Restoration raw sugar sold in the French market for *seven* cents per lb. though previously it had commanded 30 to 40 cents. It could not have been expected that a single establishment would survive such a reduction of the profits upon which their proprietors are now very wealthy.

In 1828 there were 89 beet sugar manufactories in France.

At this time there are 542 in operation and 39 being built.

The whole annual product is 96,000,000 pounds, nearly half of the annual consumption of the article in France.

The expense of producing the beet varies according to locality and the skill of the cultivator and manufacturer. It ranges between 5.7, and 9.5 cents per pound. The average of 7.6 cents is usually adopted in calculation. The wholesale price of the sugar in the market varies from 8 to 11 cents. French manufacturers have been jealous for many years that the Government was desirous of obtaining their secrets with the design of laying an excise on every pound of sugar which they make. They have in consequence been very close and seldom admit that they reap a benefit of even so much as *one* cent per lb. But the fortunes which have been made and the great and sudden extension of the business, tend strongly to prove that their profits must in many instances be greater than this.

They do not always take into account, and if they do, not with scrupulous accuracy, the benefit derived from feeding large numbers of cattle, sheep and swine, upon the green tops and upon the pulp or residuum of the beets after the juice is expressed. The manure also which is immense in quantity and superior in quality, is not embraced in any of their accounts or estimates which I have seen. An acre of land will produce 25,000 lbs.; upwards of 11 tons of sugar beets. Three tons of this will be pulp worth as much for feeding and fattening cattle as one and a half ton of good English hay; or it will make excellent manure by being thrown in a heap with other residuums and suffered to decompose.

Lime mixed with vegetable matters coming from the scum and dregs of the defficating pans and ashes from the furnaces enter largely into this compost. It is certain therefore that one cent per lb. does not represent all the profits which the manufacturers who are at the same time farmers, have been in the habit of making.

The following is a list, very limited, yet the largest to be obtained of the profits admitted by some manufacturers in different parts of Europe.

In France, 30 per cent on capital.
" Silesia, 57.
" Prussia, 61.
" Rhenish, Prussia, 9.

The Beet sugar in its chemical analysis is the same with sugar of the cane. In a raw state they are distinguishable but not at all in a refined. During the Continental System refined Colonial sugar was smuggled into France and sold for that of the beet, and at this time refined beet sugar is exported with the benefit of a heavy drawback (120 francs on every 220 lbs.) although that drawback applies by law to none but Colonial sugar which has paid a duty on its entrance. In both cases the utmost vigilance of custom-house officers and skill of chemists have been put in requisition but without success to detect these frauds.

The most experienced and intelligent sugar makers in France regard the business merely as a branch of agriculture. The processes and machinery are every year rendered more simple and cheap. A number of small farmers convert into sugar in winter the beets which they have raised in summer, and there is no reasonable doubt that the time is at hand when every proprietor of a small farm in France, may manufacture his one or two thousand pounds of sugar as regularly as he threshes his wheat, and this with no other assistance than can be rendered by his wife and children.

It is esteemed by some of the most eminent manufacturers of sugar and machinery that a farmer with his *pectare* (2½ acres) of beets may make 4,000 lbs. of sugar which would cost him but 2 or 3 cents a pound, and which he might therefore deliver in the market for 4 cts. per lb. with a handsome profit. From such industry he would derive the following advantages.

1st. The sum of $40 clear profit on his sugar.

2d. The leaves of the beet to feed bullocks, sheep, and milch cows from the middle of August to the middle of November.

3d. The pulp, equal to 3½ tons of good hay.

4th. The ashes coming from the furnaces in the manufactory.

5th. The molasses worth about 2 or 3 per cent. on the whole expenditure. Where such small domestic manufacture shall become general the price of sugar will not be above one-third the present, and the consumption will be two or three times greater.

Land has risen in the neighborhood of manufactories and more especially of those established in the large towns, 50 per cent. and fields particularly adapted to beet culture 3 to 400 per cent.

There is probably no country more susceptible of benfit from the introduction of the beet sugar business than New England. Hot summers and steady cold in winter are two things most essential to the increase and preservation of saccharine in beets and during the process of converting them into sugar. In France an idea has prevailed that 45° is the most southeren latitude which will admit of the manufacture of beet sugar. In America it is colder at 40° than it is in France at 50°.

Wages are higher with us, but the rent of land and the price of fuel would go far to balance the disadvantages of that item.

Fifty acres of land in France would cost for rent or the interest of purchase money $383; with us I suppose it would not cost above 50 to 100 dollars, though I do not profess to know very well the rent of land in the United States. Fuel all over France bears about the same price that it does in our cities. Wages of men is about 30 cts. per day and of woman and children who do most of the cultivation, 12 to 20 cts. per day, they finding themselves.

The great quantity of excellent manure which farmers would obtain from this business would be invaluable to New England.

There is probably no other means yet discovered of effecting an equal supply and improving in an equal degree the comfort of New England families and the fertility and beauty of her land and rough surface.

It is obvious that if these views are ever realized, the price of raw sugar would be ultimately reduced to three or four cents, of refined to 8 or 10 cents and that the consumption of each would be immediately doubled.—*New England Farmer.*


### New Onion Seed.

YELLOW Dutch, Large Strasburg, White Portugal and Large Red Onion Seed, the growth of 1837, just received direct from England.

The crop of Onion Seed was almost a total failure in this country last season, and being unable to obtain a supply of NEW SEED in the United States, we last fall sent an order to England for a supply from that country. It has arrived in fine order, and we are confident will prove a superior article.

REYNOLDS & BATEHAM.

Rochester, April 21, 1838.

### Early Red-blazed Seed Corn.

THIS variety of Indian Corn is very productive; the ears are of good size, and by experiments made the past season, it was found to ripen earlier than almost any other variety, not excepting the celebrated Dutton. It is for sale by

May 5 REYNOLDS & BATEHAM.

☞ Many other choice varieties for sale as usual.

### Root Cultivation.

A LARGE supply of new and genuine Ruta Baga, Mangel Wurtzel, Sugar Beet and Orange Carrot Seed, just received at the Rochester Seed Store.

REYNOLDS & BATEHAM.

Rochester, April 21, 1838.

### Siberian or Tartarian Oats.

A GOOD supply of this valuable variety of oats—a genuine article—for sale at the Rochester Seed Store.

The numerous accounts which have been published respecting the qualities oft hese Oats, render any further recommendation entirely superfluous, at least to the readers of the Genesee Farmer.

Dr. Wm. C. Dwight of Moscow, has raised them for several years, and thinks them decidedly preferable to any other variety. He recommends sowing them very thick, (from 3 to 4 bushels to the acre,) as it renders them less liable to lodge. They yield with him from 70 to 80 bushels to the acre.

May 5. REYNOLDS & BATEHAM.

### Nursery for Sale.

A RARE chance is now offered for the purchase of a young NURSERY AND FARM at Covington, Ky., which fronts half a mile on the Licking River, within a mile of its junction with the Ohio, directly opposite to Cincinnati. The Nursery and Farm comprise 101 acres of the very richest Kentucky soil; about 50 acres are laid down to mowing; between 30 and 40 to tillage, including the Nursery, and from 12 to 15 acres are filled with timber for fencing and fuel. On the premises is an Orchard of 100 thrifty young apple trees, mostly winter fruit; was set out last year. Also, another Orchard of 200 pear trees, comprising 72 different sorts, including all the varieties of winter table pears, of which the demand for the New Orleans market is almost unlimited

On the place is a good Brick House, built in 1816, with a first rate well of water, 45 feet deep, a large new Green House just finished, two large Barns, built in 1835, and all the usual out-houses—also, a Farm House, with two rooms that will let for $50 per annum, suitable for a gardener or small farmer.

The Nursery was laid out in 1835, and bids fair to do a very lucrative business, as there is nothing of the kind west of the mountains that can compete with it, for the variety and choice character of the fruits cultivated, which were all selected from the Nurseries of BUEL & WILSON and WM. KENRICK, and others, and comprise all the new sorts introduced by the Massachusetts Horticultural Society from Europe, and all the choice sorts cultivated near Boston; among them are 80 varieties of Pears, 50 of Apples, 50 of Peaches, 40 of Plums, 30 of Cherries, with a great variety of Grapes, Evergreens, Ornamental Shrubs, &c. &c. There are at least 100,000 seedlings of Apples, Pears, &c. of one and two years growth, for inoculation, now growing on the place.

The above offers a rare chance for one or two enterprising young men, to do a great business, in a perfectly healthy location, where there is little or no competition, and a demand for trees that has thus far exceeded the greatest expectations of its founders, and their ability to execute orders. It will be sold at a great bargain, on account of the death of the active partner of the concern, and the non-residence of the other.

For terms, apply (*post paid*) to S. C. PARKHURST, at Cincinnati, Ohio. May 19-4t

### Drill-Barrows or Planting Machines.

A NEW supply of Robbins' Patent Planting Machines, just received at the Rochester Seed Store.

Also, a number of Merchants' Patent Drill Barrows. [See No. 18, current vol. of the Genesee Farmer.]

May 5. REYNOLDS & BATEHAM.

### Early Seed Potatoes.

EARLY Manley or June, and Early White Kidney Potatoes, together with a great variety of other choice kinds, for sale at the Seed Store of

May 5 REYNOLDS & BATEHAM.

### Morus Multicaulis.

A FEW hundred genuine Morus Multicaulis, or Chinese Mulberry trees, just received and for sale by

May 5 REYNOLDS & BATEHAM.

### Fruit Trees for Sale.

THE subscriber respectfully informs his friends and the public that he has for sale at his Nursery in Rochester, Monroe county, state of New York, a large quantity of Fruit Trees, grafted and innoculated with the most approved kinds, now fit for transplanting, which he will sell on the most reasonable terms. SAMUEL MOULSON.

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N. B. CASH will be paid for a few thousand two years old APPLE TREES

### Monroe Horticultural Garden & Nurseries, Greece, Monroe Co., N. Y.

THIS establishment now comprises over 20 acres, covered compactly with Trees and Plants in the different stages of their growth.

The subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Grape Vines, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, splendid Pæonies, Double Dahlias, &c. &c.

Also, a large collection of Green House Plants, of choice and select varieties, in good condition.

Orders respectfully solicited. Trees and Plants, when ordered, are carefully selected and faithfully packed, and if desired delivered on the canal one mile from the Nursery, or at Rochester.

Orders for Mr. Rowe's Nursery received by the publisher of this paper.

Catalogues will be sent to every applicant gratis, or may be had by calling at the office of the Genesee Farmer.

April 1, 1837. ASA ROWE.